

IN THE CLAIMS

This Listing of Claims will replace all prior versions, and listings, of claims in the subject Patent Application:

Listing of Claims:

1. (Currently amended) A smart recording system for monitoring wafer fragmentation, comprising ~~mainly~~:
  - a plurality of photographing devices for simultaneously monitoring ~~a the circumstances when wafers during processing thereof in a polishing apparatus are polished~~;
  - a multiple-image transmitter for transferring ~~respective the image frames generated signals photographed~~ by said photographing devices;
  - a multiple-image receiver for receiving ~~the image frames signals~~ transferred from said multiple-image transmitter and ~~then~~ merging ~~the images simultaneously captured ones thereof at the same time~~ into a ~~common the same~~ image frame; and,
  - a personal computer ~~having wherein the I/O port of an image-capturing card can receive for storing the common image frame formed by signal transferred from~~ said multiple-image receiver ~~in a sequentially shifted manner through an image file set having a predetermined frame capacity, said personal computer PC also being operable to selectively activate and deactivate the photographing devices responsive to entry and exit of used to receive the signal when a wafer relative to enters or leaves the polishing~~

apparatus, and responsive to an occurrence the signal of wafer fragmentation within the polishing apparatus from a signal transmitting device.

2. (Original) The smart recording system for monitoring wafer fragmentation as claimed in claim 1, wherein said photographing devices are CCD cameras.

3. (Currently amended) The smart recording system for monitoring wafer fragmentation as claimed in claim 1, wherein said personal computer signal transmitting device is coupled to an I/O port of the polishing apparatus to receive a signal therefrom indicative of the entry and exit of the wafer relative to the polishing apparatus.

4. (Currently amended) A smart recording method for monitoring wafer fragmentation, comprising mainly the steps of:

(1). clearing image data from three files Image(1), Image(2), and Image(3) set in a personal computer;

(2). judging determining whether a wafer enters a polishing apparatus; ~~repeating this step if the answer is negative until a wafer enters the polishing apparatus;~~

(3). selectively activating a simultaneous capturing of respective images frames by a plurality of photographing devices responsive to entry of a wafer into the polishing apparatus, and merging and storing the respective

images frames into a common image frame in said file Image(3);

(4). judging determining whether a signal of wafer fragmentation has occurred within the polishing apparatus is generated; maintaining the status of an selectively deactivating the image-capturing responsive to a determination of wafer fragmentation occurrence system and stopping the process if the answer is positive; continuing the next step otherwise;

(5). continuing to continuing a sequential capture of images frames by said photographing devices in the absence of a wafer fragmentation within the polishing apparatus, judging determining whether the wafer exits leaves the polishing apparatus, and deactivating the capture of image frames responsive to jumping back to said Step (4) if the answer is negative until the wafer exiting leaves the polishing apparatus;

(6). storing in sequentially shifted manner an image data content of said file Image(2) into as said file Image(1), storing in sequentially shifted manner an image data content of said file Image(3) into as said file Image(2), and clearing image data from said file Image(3); and,

(7). repeating said Steps (2) to (6) for each of a until the polishing work of the whole batch of wafers is finished.

5. (Original) The smart recording method for monitoring wafer fragmentation as claimed in claim 4, wherein said photographing device used in said Step (5) is a CCD camera.

6. (Currently amended) The smart recording method for monitoring wafer fragmentation as claimed in claim 4, wherein the determination judgement in said Step (2) is made according to a wafer-entry signal transferred from an I/O port of the polishing apparatus.
7. (Currently amended) The smart recording method for monitoring wafer fragmentation as claimed in claim 4, wherein the determination judgement in said Step (4) is made according to a wafer-fragmentation signal transferred from an I/O port of the polishing apparatus.
8. (Currently amended) The smart recording method for monitoring wafer fragmentation as claimed in claim 4, wherein the determination judgement in said Step (5) is made according to a wafer-exit signal transferred from an I/O port of the polishing apparatus.
9. (Currently amended) The smart recording method for monitoring wafer fragmentation as claimed in claim 4, wherein after deactivation the status of said image-capturing system is maintained and the process is stopped in said Step (4), the image data content of said files Image(1), Image(2), and Image(3) are provided for user examination technicians can examine the circumstances.
10. (Currently amended) The smart recording method for monitoring

wafer fragmentation as claimed in claim 9, wherein said Step (1) is subsequently executed for another wafer in the batch following user examination of a preceding wafer at Step (4) jumped back to after technicians examine the circumstances.

11. (Currently amended) A storing method of wafer images, comprising mainly the steps of:

(1). setting a predetermined parameter to a first state responsive to entry of a wafer into a polishing apparatus and to a second state responsive to exit of the wafer therefrom;

(1) (2). selectively activating and deactivating simultaneous capturing of respective ~~an~~ image signals by a plurality of photographing devices responsive to the predetermined parameter being respectively in said first and second states, the capturing of image signals being automatically interrupted responsive to detection of wafer fragmentation;

(2) (3). transferring the image signals to an image receiver;

(3) (4). receiving the image signals by said image receiver;

(4) (5). merging the images derived from the image signals captured at the same time into a common the same image frame by said image receiver;

(5). judging whether a wafer enters a polishing apparatus (judging whether the state of the store instruction is “ON”);

(6). digitizing the ~~captured~~ common image frame by an image-capturing card in a PC when the predetermined parameter is in said first state a wafer enters the polishing apparatus; and,

(7). storing said digitized common image frame in a sequentially shifted manner through into an image file Image(3) set having a predetermined frame capacity in said PC.

12. (Original) The storing method as claimed in claim 11, wherein said photographing devices are CCD cameras.

13. (Canceled).